

## **United States Department of the Interior**

U.S. Fish and Wildlife Service

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 FAX: (602) 242-2513

In Reply Refer To:

AESO/FA

October 4, 2001

Ms. Cindy Lester  
Chief, Regulatory Branch  
U.S. Army Corps of Engineers  
3636 North Central Avenue, Suite 760  
Phoenix, Arizona 85012-1936

Dear Ms. Lester:

On September 21, 2001, the Service received a copy of comments prepared by the Environmental Protection Agency (EPA) on Public Notice 1999-16129-RWF (PN) for the Paradise Ridge Project. The PN was not provided to our office via regular mail. On September 24, we informed your office, via electronic mail, that we had not been afforded an opportunity to comment. Your staff responded, via e-mail, that the Corps would accept comments, though they would not be considered in the project's environmental assessment (EA). These comments are provided under the authority of and in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended U.S.C. 661 et. seq.) (FWCA).

The Arizona State Land Department has applied for a Section 404 Clean Water Act (CWA) permit to construct a 2,131-acre master-planned community in Phoenix, Maricopa County (Sections 15, 22, 27, 33, and 34, T4N, R4E). Approximately 33.4 acres of jurisdictional waters of the United States, of a total 47.9 acres present on site, would be directly subjected to the discharge of dredge and fill material in the process of constructing roads, flood control facilities, golf courses, building pads, utilities, and trails.

We believe the total impact of the development which would be authorized by your agency should be assessed, including parts located on uplands. The impact assessment should include direct, indirect, and cumulative effects, and any interrelated and interdependent activities. We believe the footprint of the permitted project that should be assessed by the Corps is, at minimum, the total 2,131 acres of development. The PN provides no information regarding the effects of adjacent upland development on the biological functioning of jurisdictional washes, nor does it provide information on the effects of the larger project on a landscape scale. We suggest an assessment be conducted to determine the extent of secondary and cumulative effects to jurisdictional waters as defined in the Section 404(b)(1) Guidelines (CFR 40 part 230.11).

Alterations to adjacent upland areas can impact the physical, chemical, and biological characteristics of adjacent and downstream jurisdictional waters and result in secondary effects through modification of ecological processes such as infiltration capacity, surface runoff, underground water storage, sediment load, and organic matter input. For instance, the immediate hydrologic effects of upland development is the increase in the area of low or zero infiltration capacity, due to decreased energy dissipation provided by roughness (i.e. removal of plant cover) and increased impermeable surface (i.e. placement of asphalt and concrete). Temporary secondary effects can include increases in sediment yield and a decrease in the number of smaller order streams to convey sediment load, while long term secondary effects may include incision of arroyos and the degradation of existing channels resulting in channel downcutting or enlargement. The combined effects of adjacent upland development may include bank degradation, channel downcutting, increased flood events, decreased surface flow period, and reduced biological productivity.

We believe the Corps has the authority and responsibility to consider all indirect effects of the discharge of dredged and fill material. The 404(b)(1) Guidelines direct the Corps to analyze the effects of 404 permitted activities on “surrounding areas” as well as “other wildlife” including resident and transient mammals, birds, reptiles, and amphibians (40 CFR Part 230). Additionally, the Regulations For Implementing The Procedural Provisions Of The National Environmental Policy Act (NEPA) (40 CFR, Parts 1502.16 and 1508.8), states the environmental consequences of an action include both direct effects and “Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.”

Most transient wildlife species associated with aquatic ecosystems utilize adjacent upland areas for a large portion of their life cycle. For instance, Gila woodpeckers used saguaros located in adjacent uplands for nesting purposes while foraging extensively along washes. Also bird community structure in a given habitat type depends, at least partially, on bird species composition and density in adjacent habitats. While desert mule deer utilize uplands, xeroriparian washes and their associated vegetation were also an important component of desert mule deer habitat. It has also been found that as riparian areas become increasingly isolated, or fragmented, they rapidly lose riparian or upland herpetofaunal species. These concepts illustrate that an intimate biological and ecological relationship exists between adjacent uplands and waters, and that activities in uplands will necessarily have some level of effect on the biological function of adjacent jurisdictional waters. Modification or loss of upland areas may displace transient wildlife species, lower plant and animal species density and richness, disrupt the normal functions of the ecosystem, and lead to reductions in overall biological productivity and diversity.

The loss of upland vegetation communities associated with development of the proposed community could have a negative impact on wildlife populations within and adjacent to the

project area. Uplands provide movement corridors, nesting areas, and foraging areas for numerous wildlife species. The proposed modification could adversely affect population dynamics through habitat loss or fragmentation. This type of disturbance can disrupt intra- and interspecific wildlife interactions, resulting in population and community shifts. Animals could be displaced to adjacent areas that may already be functioning at or near carrying capacity, resulting in increased competition, predation, disease transmission, and mortality. The associated development and increased human activity could place increased stress on local wildlife resulting in reduced fecundity and recruitment, adversely affecting local population viability.

The PN states that a preliminary determination has been made that an environmental impact statement (EIS) is not required for the proposed work. As discussed above, your agency is preparing an EA in accordance with the National Environmental Policy Act. We request that, when completed, the EA be submitted to our office so we can evaluate the significance of environmental impact and complete our mandated review of the proposed project.

Corps regulations (CFR 33, Appendix B to Part 325) states the District Engineer is considered to have authority over portions of the project beyond the limits of jurisdiction “where the environmental consequences of the larger project are essentially products of the Corps permit action.” If it is impracticable to bridge span all jurisdictional waters on site, thus avoiding impacts to jurisdictional waters, we believe the proposed development could not occur but for the issuance of a Section 404 permit and it would be within Corps authority to extend the scope of analysis beyond the limits of the ordinary high water mark and assess interrelated and interdependent effects. Corps regulations involving the Section 404 public interest review state:

The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments.

In regard to determining the appropriate scope of analysis, “in all cases, the scope of analysis used for analyzing both impacts and alternatives should be the same scope of analysis used for analyzing the benefits of the proposal”. We assume the housing, associated residential amenities, and economic growth provided by the proposed activity will be considered as a benefit in your public interest review. We believe the Corps should also consider the detriments, such as overall loss of wildlife habitat and aquatic ecosystem function, associated with that development.

The EA should include the potential effects of the master-planned community on Sonoran desertscrub vegetation communities and local and regional wildlife resources; including potential shifts in community structure, changes in diversity, relative abundance, and species richness, and long-term effects on population demographics and viability. This analysis should be more than a qualitative assessment, and use acceptable empirical methodologies to quantify and evaluate the expected impacts on biotic resources.

The PN states that the applicant is proposing to mitigate by enhancing vegetation along 55.9 acres of over-bank areas adjacent to 15.5 acres of preserved washes. In accordance with existing regulations and procedures, mitigation measures should be developed that first address the issues of avoidance and minimization, and lastly compensation. For compensatory mitigation, measures should not only mitigate vegetative parameters such as canopy cover, biomass, and total volume; but should also mitigate changes or loss of animal diversity, abundance, density, and richness. Monitoring provisions and criteria should be developed to track the success of mitigation for animal populations as well as vegetation communities.

We do not believe providing open space habitat islands within what will essentially be an urban landscape can adequately mitigate the expected detrimental affects on regional wildlife communities and the loss of habitat contiguity. In regards to the proposed mitigation, the EPA states in their comments on the PN, “[w]hile revegetation will provide some habitat function, it doesn’t provide adequate compensation for acreage and adequate replacement of functions of these waters.” We request that the mitigation plan be modified accordingly and provided to our office so that we may evaluate the plan’s effectiveness and provide written recommendations.

The PN states preliminary determinations indicate the proposed activity would not affect endangered or threatened species, or their critical habitat. The site description in the PN appears consistent with suitable habitat for the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*). However, no information is provided regarding recent surveys, habitat suitability analyses, nor the amount of suitable habitat that would be affected. In our view, the loss of habitat suitable and available for use by a listed species would constitute a “may affect” scenario under section 7 of the Endangered Species Act (ESA). Therefore, we do not concur with your determination of no effect. A biological assessment (BA) should be prepared, in accordance with section 7 of the ESA, and submitted to our office for review.

The 404(q) Memorandum of Agreement Between the Department of the Interior and the Department of the Army provides for cooperation in acquiring and conveying project information needed by either agency to fulfill its permit review responsibilities. At this time we believe we have not been provided adequate project information to allow us to prepare substantive project specific comments. Based on these concerns, the Service objects to the issuance of this permit until, and unless, we are provided an opportunity to review the EA, BA, and revised mitigation plan and provide substantive comments and recommendations in accordance with the FWCA and section 404(m) of the CWA. If we can be of further assistance please contact Mike Martinez (x224) or Don Metz (x217).

Sincerely,

/s/ David L. Harlow  
Field Supervisor

Ms. Cindy Lester

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cc: Regional Administrator, Environmental Protection Agency, San Francisco, CA  
Supervisor, Project Evaluation Programs, Arizona Game and Fish Department, Phoenix, AZ  
Director, Arizona State Land Department, Phoenix, AZ (Attn: V. Ottozawa-Chatupron)

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